



International Journal of Education Economics and Development

ISSN online: 1759-5681 - ISSN print: 1759-5673

<https://www.inderscience.com/ijeed>

Entrepreneurs' perceptions of their entrepreneurial process: a qualitative analysis of in-depth interviews with education graduates in the Basque Country, Spain

Jessica Paños-Castro, María José Bezanilla, Leire Markuerkiaga

DOI: [10.1504/IJEED.2023.10051448](https://doi.org/10.1504/IJEED.2023.10051448)

Article History:

Received:	26 January 2022
Accepted:	05 September 2022
Published online:	22 January 2024

Entrepreneurs' perceptions of their entrepreneurial process: a qualitative analysis of in-depth interviews with education graduates in the Basque Country, Spain

Jessica Paños-Castro* and
María José Bezanilla

Faculty of Education and Sports,
University of Deusto,
Unibertsitate Etorb., 24,
48007 Bilbo, Bizkaia, Spain
Email: jessicapanos@deusto.es
Email: marijose.bezanilla@deusto.es
*Corresponding author

Leire Markuerkiaga

Polytechnic School,
Mondragon Unibertsitatea,
Edif. 6, Loramendi Kalea, 4,
20500 Arrasate, Gipuzkoa, Spain
Email: lmarkuerkiaga@mondragon.edu

Abstract: Entrepreneurship is necessary for the economic development of societies. Universities play a key role in this process by fostering entrepreneurship and promoting entrepreneurial skills. Studies show that entrepreneurship is largely mainstreamed into economics faculties; however, a multidisciplinary approach should be adopted to work across different fields. The aim of this study is to explore how graduates from faculties and schools of education in the Autonomous Region of the Basque Country (Spain) perceive the factors that have influenced their entrepreneurial process, in order to establish good practices, and to highlight strengths and weaknesses. A qualitative methodology was used by conducting and analysing 20 in-depth interviews. The main conclusions point to the lack of development of entrepreneurial skills in universities, the use of traditional methodologies by teaching staff, entrepreneurs' passion and their desire to create companies that possess specific hallmark characteristics, among others.

Keywords: graduates; faculty of education; entrepreneurship; entrepreneurs; Basque Country; self-perception; qualitative analysis; interviews; Entrepreneurial University; case analysis; entrepreneurial education; Spain.

Reference to this paper should be made as follows: Paños-Castro, J., Bezanilla, M.J. and Markuerkiaga, L. (2024) 'Entrepreneurs' perceptions of their entrepreneurial process: a qualitative analysis of in-depth interviews with education graduates in the Basque Country, Spain', *Int. J. Education Economics and Development*, Vol. 15, Nos. 1/2, pp.57–81.

Biographical notes: Jessica Paños-Castro has a degree in Business Administration and Management, a degree in Primary Education and a Masters degree in Development and Management of didactic-methodological innovation projects in educational institutions (research itinerary). She is currently finishing her Doctorate in Education on Entrepreneurship in the faculties of education. She is a member of the eDucaR research team. Her lines of research deal with entrepreneurial competence, entrepreneurship, ICT and active methodologies.

María José Bezanilla holds a PhD in Education from the Institute of Education of the University of London and is a Senior Lecturer at the University of Deusto in the Department of Education. She is currently the coordinator of the PhD in Education at the Faculty of Education and Sports of the same university. As member of eDucaR research team, she participates in research projects and has numerous publications on critical thinking, the use of ICT in the university context and the development of competences in higher education. She is also a member of the Teaching Innovation Unit of the University of Deusto.

Leire Markuerkiaga is a Lecturer and researcher at Mondragon Unibertsitatea Faculty of Engineering. She is an Industrial Organization Engineer and has a Master in Business Administration (MBA) from Mondragon University. Her current research focuses on entrepreneurship, academic technological entrepreneurship, the entrepreneurial university and university-industry collaboration. She has been involved in various regional research projects related to academic entrepreneurship and university-industry collaboration. She shares her teaching and research activities with management tasks, as she is innovation-management-organization called research group coordinator.

1 Introduction

Several definitions have been offered for the term ‘entrepreneurship’. In 1755 Richard Cantillon first defined the concept of ‘entrepreneur’ as “the person who pays a certain price to resell a product at an uncertain price, thus making decisions about obtaining and using resources, and consequently admitting risk in entrepreneurship” (p.21). After classical economists such as Richard Cantillon and Adam Smith introduced the term with economic connotations (Aldana-Rivera et al., 2019), it is used today in a much broader and more pluralistic sense (Julià, 2013) to mean autonomous action (Organisation for Economic Co-operation and Development, 2005), entrepreneurial spirit, the ability to bring about change (European Union, 2006), autonomy and personal initiative (Spanish Head of State, 2006), and initiative and entrepreneurship skills (Spanish Head of State, 2013). Therefore, entrepreneurship is not only linked to economic and productive activities such as the creation of companies (Ferreira, 2019; González-Tejerina and Vieira, 2021; Vázquez, 2017), but is cross-sectional and should be included in the all-round education of social subjects (Aldana-Rivera et al., 2019).

Education is a tool that enables individuals to acquire knowledge and develop general and specific skills that are useful for personal and work performance (Rovayo, 2012). In this sense, it is essential to ensure that entrepreneurial education is offered by universities not only to teach students how to run a business or set up a company, but also to foster general creative and critical thinking skills, curiosity, an openness to lifelong learning, a

proactive attitude, autonomy, innovation, and an ability to recognise opportunities (González-Tejerina and Vieira, 2021; Jiménez, 2015). In this regard, Davey et al. (2016) noted that entrepreneurship education should encompass four progressive stages: firstly, sensibilisation for entrepreneurship, to raise awareness of its importance; secondly, entrepreneurship education, including the development of both hard and soft skills; thirdly, education for entrepreneurship, providing practical assistance and training to those considering starting a new venture; and fourthly, education in entrepreneurship, providing ongoing business education to those who have already started a venture. Gibb (2008), for his part, proposed ensuring that entrepreneurial education is embedded in the education system, adopting a child-centred approach in primary education, a subject-centred approach in secondary education, and professionally focused skill-centred teaching in higher education. For Timmons and Spinelli (2009), entrepreneurs are not born with the ability or the gift to be entrepreneurs, but they are made through the training along their lives. Martínez et al. (2016) considered that some skills and characteristics of entrepreneurship can be taught and be developed in individuals who do not have them innately.

Alferaih (2017) indicated that there are up to 72 independent variables that influence entrepreneurial intent, and which can be classified into three groups: demographic profile (including age, gender and previous experience); contextual factors (including education, environment and culture); and personality characteristics (including self-efficacy, confidence, autonomy, locus of control, and tendency to take risks, among others). According to Lüthje and Franke (2003), the intention of students to become business owners is influenced both indirectly by steady personality traits and directly by contextual factors. The latter are usually easier to modify. These perceptions may be altered and improved by suitable initiatives such as entrepreneurship programmes by using positive role models in teaching, establishing entrepreneurial support networks and arranging business plan competitions. Engle et al. (2010), for their part, conducted a study on Ajzen's model for predicting entrepreneurial intent in 12 countries. These results support Ajzen's (1991) claim that the three antecedents (attitude, subjective norm and perceived behavioural control) are important to predict entrepreneurial intent, but not in all situations and countries and not to the same degree.

While the conception of the modern university emerged around 1,810 with the creation of the University of Berlin, in Germany (Torres et al., 2018), entrepreneurship is relatively new as a formal subject of study in universities. It has been taught since 1947, and has since gained ground in universities in the USA and Europe, especially in the UK, Belgium and Germany, among others (Volkman, 2004). For example, in 2001, entrepreneurship was already being offered in 1200 business schools in the USA (Lackeus, 2015). The aim should be to create acceptance of entrepreneurship programmes throughout the university community and not only in economics faculties (Volkman, 2004), with entrepreneurship being understood as a cross-cutting axis of the educational process (Rovayo, 2012). In this way, "from a very young age, students must perceive entrepreneurship as another alternative offered by the labour market" [Martínez et al., (2016), p.253]. Since 2004, entrepreneurship education in Finland has had a presence in all stages of education from primary school to university in various programmes, including Agricultural Science, tourism studies, event management, food science, engineering and teacher training, among others (Finnish Ministry of Education and Culture, 2009; Korhonen et al., 2012). Volkman (2004) and Rovayo (2012) indicated that there are two models of entrepreneurial education within university-wide

programmes. There are ‘magnet programmes’, which are taught in a single school or faculty (business school), but allow students from other faculties to attend; and there are the ‘radiant programmes’, where courses are taught in several schools or faculties.

Entrepreneurship is generally measured in terms of economic performance: a country’s economic growth, job creation and gross domestic product growth. However, it can also generate other benefits, such as competencies such as solidarity, happiness, and social capital, among others (Cárdenas et al., 2015). People undertake these courses for a variety of reasons. Some start the process of creating a business in response to having identified untapped opportunities in the market; there are also people who decide to start a business because they need to find a job. Whereas for 70.7% of the entrepreneurial population in Spain, pursuing an opportunity is the main motivation for creating a business, for 22.6% it is a necessity, because they see that the probability of finding a job is low (Global Entrepreneurship Monitor, 2019), perhaps driven by the high unemployment rate in Spain and because of the current situation, which is volatile, complex and uncertain (Lourenço et al., 2013). Specifically, 14.57% of the population in Spain were unemployed in the third quarter of 2021 (Spanish National Statistics Institute).

Being entrepreneurial involves a high level of sacrifice, as well as being stressful and unrewarding (Cárdenas et al., 2015). A total of 3037 students from 6 different countries (USA, China, India, Turkey, Belgium and Spain) identified some barriers to entrepreneurship, including a lack of support structures and considerable tax costs; a lack of entrepreneurial skills (accounting, management and marketing skills); and a lack of mentoring opportunities (Pruett and Harun, 2017). However, 5% of Spanish university students reported that they intended to start a company when they completed their education, a proportion that is higher than in Germany (2%) and Italy (3.8%) (Global Entrepreneurship Monitor, 2019). Three in every ten fourth-year students interviewed considered entrepreneurship to be a career option in the next three years (Guerrero et al., 2016); The highest percentages of students who wanted to be self-employed were in engineering and architecture degrees (32.2%), followed by those in Social Sciences and Law (28.5%), and Science degrees (16.5%) (Ruiz et al., 2019).

So far, entrepreneurship has not been seen as a job option for many graduates (Hartshorn and Hannon, 2005). How many graduates of education faculties become entrepreneurs? According to Pérez and Serrano (2012), “there is a widespread belief among entrepreneurs that going to university does not promote entrepreneurial initiatives but rather the vocation to become a civil servant” (p.295). This seems to suggest that university students are passive, lack initiative, and are unaccustomed to risk (Pérez and Serrano, 2012).

The latest study carried out by the Spanish Ministry of Education, Culture and Sport (2016) found that the percentage of graduates who register with the social security authorities within a self-employed scheme is relatively low. In the first year after graduation, 7% of people who registered were self-employed. Four years after graduation, this percentage rose to 10.3% (see Table 1). The sector with the highest percentage of self-employed graduates in both the first and subsequent years was Health Sciences. By field of study, they were dentistry graduates (66.7%), followed by podiatry graduates (60.1%) and architecture graduates (48.1%). Very few education graduates were registered as self-employed, although a small increase has been seen over the years. For example, in the primary education degree, only 3.5% of the participating students

became self-employed within a year of completing their degree; this percentage rose to 4.8% four years after completing their studies (see Table 1).

Table 1 University graduates in the academic year 2009–2010 registered with the social security system as self-employed four years after completing their education

	2011	2012	2013	2014
Degrees and Master's degrees	7%	7.2%	8.6%	10.3%
Dentistry	53.2%	57.7%	61.7%	66.7%
Podiatry	40.9%	55.3%	59.0%	60.1%
Architecture	34.4%	37.4%	42.8%	48.1%
Social Education	2.6%	3.2%	4.3%	5.2%
Psychopedagogy	4.0%	4.1%	6.7%	6.6%
Primary education	3.5%	3.4%	4.6%	4.8%
Early childhood education	2.7%	2.6%	3.8%	4.6%
Pedagogy	3.3%	4.5%	5.8%	8.8%

Source: Ministry of Education, Culture and Sport (2016)

According to the latest labour market survey available (Lanbide, 2017), 6% of all graduates in the Autonomous Region of the Basque Country (Spain) are self-employed, whereas 73% of them are wage earners (the remaining percentage covers those who were unemployed, in education, or on paid and unpaid work placements). By degree, 84% of social education graduates were wage earners and 1% were self-employed and working for the University of the Basque Country; 75% of early childhood education graduates were wage earners and 3% were self-employed and working for the University of the Basque Country; and 83% of primary education graduates were employed and 2% were self-employed and working for Mondragon Unibertsitatea (see Table 2).

Table 2 Employment status of education graduates from all the universities in the autonomous region of the Basque Country

	Self-employed	Wage earners	Others (unemployed with experience, unemployed with no experience, experienced job seekers, in education, in a paid or unpaid traineeship programme, etc.)
Social education (University of the Basque Country)	1%	84%	15%
Social education (University of Deusto)	3%	87%	10%
Early childhood education (University of the Basque Country)	3%	75%	22%
Early childhood education (Mondragon Unibertsitatea)	1%	77%	22%
Primary education (University of Deusto)	3%	83%	14%

Source: Lanbide (2017)

Table 2 Employment status of education graduates from all the universities in the autonomous region of the Basque Country (continued)

	<i>Self-employed</i>	<i>Wage earners</i>	<i>Others (unemployed with experience, unemployed with no experience, experienced job seekers, in education, in a paid or unpaid traineeship programme, etc.)</i>
Primary education (University of the Basque Country)	2%	79%	19%
Primary education (Mondragon Unibertsitatea)	2%	83%	15%
Foreign language teacher training (University of the Basque Country)	22%	67%	11%
<i>Total</i>	<i>6%</i>	<i>73%</i>	<i>21%</i>

Source: Lanbide (2017)

For all these reasons, it is important to promote the entrepreneurial ecosystem of universities within the various groups that make up the university community (students, alumni, teaching staff, and researchers, among others) (Castillo-Vergara and Álvarez-Marín, 2016; Guerrero et al., 2016; Martínez et al., 2016). The university community should understand the importance of entrepreneurship and bring it into their classrooms and activities at all stages (Álvarez et al., 2006; Julià, 2013). Furthermore, universities should contribute to regional and national development, favouring the academia-industry-government triple helix model, and the Entrepreneurial University (Carayannis et al., 2016; Etzkowitz, et al., 2000; Kolehmainen et al., 2016; Philpott et al., 2011). However, “universities do not stand out for an overly entrepreneurial and innovative orientation” [Torres et al., (2018), p.2] and there is still “much to be done in this area in all our universities” [Torres et al., (2018), p.21]. This is why the Spanish Government (2021) has recently promoted the Spanish entrepreneurial nation strategy, which stresses the importance of using active methodologies such as ‘learning by doing’ for the acquisition of entrepreneurial skills through practice; promoting a compulsory subject on entrepreneurship and business creation in all university degrees to ensure that students acquire basic skills in leadership, creativity, finance and marketing; promoting a Master’s degree in innovative entrepreneurship; creating entrepreneurship centres, chairs and University-Business classrooms; fomenting an entrepreneurial culture; encouraging participation in the capital of university spin-outs (USOs); creating companies and USOs.

In Spain, only 37.1% of the students surveyed have received training in entrepreneurship at university (Global Entrepreneurship Monitor, 2019; Ruiz et al., 2019). Education and training are key to fostering entrepreneurship in Spain. In fact, 33% of respondents to the study by the Global Entrepreneurship Monitor (2020) supported this idea. Experts have also pointed to the need to further strengthen government policies (78.8%), financial support (48.5%), and education and training (42.4%) in this area.

Castillo-Vergara and Álvarez-Marín (2016) called for further studies to be conducted to more specifically assess the internal and external factors that could influence university students’ entrepreneurship. Different studies have been conducted on the entrepreneurial intent of university students. For example, Yin et al. (2020) carried out a survey of 205 preschool education graduates. Only 35% of students had a clear intention of starting a

business and more than 90% of students held that they had developed an inadequate level of entrepreneurial ability. According to the results of Tarhan's research (2021), the pre-service teachers' perceptions of entrepreneurship education and entrepreneurship skills are generally positive. However, little research has been done on the factors that have influenced entrepreneurial activities among education graduates from the perspective of the Entrepreneurial University, as entrepreneurship is a field that has only recently been incorporated and prioritised in these studies (Fuentes, 2018). This study discussed below is a response to this need, and is focused on graduates of faculties of education. The article is structured as follows: first the general and specific objectives of the study are presented, followed by an outline of the methodology, the participants and the procedure used, and finally, the results and some conclusions are provided.

2 Objectives and methodology

2.1 Objectives

The main objective of this study is to identify the factors that have influenced the development of the entrepreneurial activity of graduates from faculties and schools of education in the Autonomous Region of the Basque Country (Spain).

The research also has the following specific objectives:

- To determine the strengths and weaknesses of faculties of education in relation to entrepreneurship.
- To establish guidelines to promote entrepreneurship in faculties of education.

Table 3 Interview script

<p><i>Context and personal questions:</i></p> <ul style="list-style-type: none"> • What is the name of your company or organisation? • What does your company or organisation do (goods and/or services provided)? • When did you set up your company or organisation? • At which university did you study? What degree did you receive? What year did you complete your degree?
<p><i>Questions about the legal and administrative context:</i></p> <ul style="list-style-type: none"> • Did you receive any public support for setting up your company or organisation? Did the faculty inform you about this? • Have you made use of any public or private infrastructures (incubators, business and innovation centres, technology parks, associations, services...) to set up your company or organisation?
<p><i>Questions about the organisational context:</i></p> <ul style="list-style-type: none"> • Have you received private seed capital to set up your business or organisation? • Does your company or organisation develop high-tech products? • Does your company or organisation develop innovative products or services? • Does your company or organisation work in emerging sectors? • Is your company or organisation involved in a research project?

Source: Developed by the author

Table 3 Interview script (continued)

<i>Questions about training in entrepreneurship for faculty staff:</i>
<ul style="list-style-type: none"> • Do you think that the lecturers and professors you had in your degree had received training in entrepreneurship? • What in knowledge transfer? • And in university spin-outs?
<i>Questions about whether any professionals from the respondents' company or organisation's sector had been involved in the development and implementation of the curriculum:</i>
<ul style="list-style-type: none"> • Did any of your lecturers/professors work for companies or organisations outside the university?
<i>Questions about mission and strategy:</i>
<ul style="list-style-type: none"> • Do you feel that your faculty gave importance to entrepreneurship in its mission and strategic plans? • What about social engagement? • What about internships with local companies?
<i>Questions about training and research in entrepreneurship:</i>
<ul style="list-style-type: none"> • Did you develop entrepreneurial skills as part of your degree studies, either as a general and/or as a transversal skill? As part of which subject was this delivered? • Did your faculty offer extracurricular programmes on entrepreneurship? Which ones? Did you participate in any? Why did you do this? What benefits has it brought to you? • Have you participated in any entrepreneurship training courses offered by the Alumni Association? Which ones? Why did you do this? What benefits has it brought to you? • Have you participated in any research related to entrepreneurship?
<i>Questions about extracurricular training in entrepreneurship:</i>
<ul style="list-style-type: none"> • Have you taken in any extracurricular courses on entrepreneurship awareness, opportunity identification, business plan development, innovative project development and/or spin-out launching?
<i>Questions about active methodologies:</i>
<ul style="list-style-type: none"> • What kind of active methodologies did your lecturers/professors use? • Did you have the opportunity to take a work placement with an entrepreneur? Where? What did you learn about entrepreneurship from these placements? • What kind of educational resources did your lecturers/professors use? Were these innovative? • Have you developed any innovative resources yourself?
<i>Questions about internationalisation:</i>
<ul style="list-style-type: none"> • Did you take part in the Erasmus programme? Where? • Did you have the opportunity to participate in any international conferences or forums? Was it a source of inspiration for setting up your company? • Did you have any exchange lecturers/professors from universities abroad? • Did you have the opportunity to meet students from universities abroad?

Source: Developed by the author

2.2 Instrument of data collection

The study was undertaken from a qualitative perspective. Semi-structured in-depth interviews were held with entrepreneurial graduates of the Faculties of Education. This was a multiple case study based in the Basque Country (Spain), which analysed cases from the University of Deusto, the University of the Basque Country, and Mondragón University.

Paños-Castro et al. (2021) developed a model for measuring the entrepreneurial university in faculties of education consisting of 14 dimensions (and 44 items): legal and administrative context; organisational context; entrepreneurship funding; training in entrepreneurship for Faculty staff; Inclusion of professionals from businesses and organisations in the development and delivery of the curriculum; mission and strategy; Policies and procedures; support from the management team; organisational design; training and research in entrepreneurship; extracurricular training in entrepreneurship; active methodologies; internationalisation; other data relating to the faculty and/or university. This model was used in the analysis conducted here to produce the interview script, taking into account only those items that graduates could directly have observed or perceived in their degree courses. For example, a graduate would not know whether entrepreneurship was on the dean's agenda. The following interview script was used:

2.3 Participants and procedure

Participants were required to meet the following criteria:

- Created a company after 2000
- Be engaged in companies which are still in business
- Be education graduates from universities in the Basque Country, i.e., have completed degrees or Bachelor's degrees related to education, such as primary education, early childhood education, social education, education and/or psychopedagogy.

An informed consent form was designed to ensure confidentiality, anonymity, privacy, and free choice of participation. The form also stated the research objectives. In order to select the participants, contact was made with official organisations such as business incubators, entrepreneurship centres, the SPRI group, staff from the global entrepreneurship monitor of the Basque country, the department of digital transformation and entrepreneurship of the Basque Government, development agencies, directors of masters and degrees in entrepreneurship, and provincial councils. These organisations provided us with a contact database.

Participants received an email invitation and were subsequently contacted by telephone. Interviews were conducted between 1 July 2021 and 22 September 2021 via Google Meet, and had an average duration of 40 minutes.

In order to improve validity, the interviews were recorded in order to collect verbatim accounts from participants, and they were analysed and reviewed by three researchers. As two criteria were established for the selection of participants (university and type of university course), at least two subjects meeting each criterion were necessary for representativeness (Miles et al., 2020). Except for two cases (one graduate of the University of Deusto who had completed an early childhood education and/or primary degree, and one graduate of the University of the Basque country who had completed an infant and/or primary degree), representativeness in subject selection was assured (see Table 4).

Table 4 Resulting segmentation

Criterion	University of Deusto			University of the Basque Country			Mondragon Unibertsitatea		
	University degree	Early childhood education/primary	Social education	Education/psychopedagogy	Education/psychopedagogy	Social education	Early childhood education/primary	Social education	Education/psychopedagogy
Number of interviews to be conducted	1	2	2	2	2	2	2	01	0
Number of interviews conducted	72	32	62	42	22	0	0	0	0

Source: Developed by the author

Table 5 Study participants by type of company, degree and university

Participant	Sex	Type of company	Year the company was established		Degree	University
1	Woman	English School	2016		Primary education	University of the Basque Country
2	Woman	Feminist Training Association	2021		Social Education	University of the Basque Country
3	Woman	Psychopedagogy practice	2020		Social Education	University of the Basque Country
4	Man	Provides services to develop motivated, cohesive, innovative, and highly competent work teams	2009		Social Education and Psychopedagogy	University of the Basque Country
5	Woman	Psychopedagogy practice	2009		Psychopedagogy	University of Deusto
6	Woman	Equality service, participatory processes	2002		Education Sciences	University of the Basque Country
7	Woman	Education Association	2021		Education	University of Deusto
8	Woman	Education centre	2016		Early Childhood Education and Psychopedagogy	Mondragon Unibertsitatea and the University of the Basque Country
9	Woman	Education centre	2016		Early Childhood Education	Mondragon Unibertsitatea
10	Woman	Coaching service	2016		Education	University of Deusto
11	Woman	Socio-educational intervention service: child protection, people in exclusion, project facilitation	2001		Social Education	University of the Basque Country
12	Man	Socio-educational intervention service: child protection, people in exclusion, project facilitation	2001		Social Education	University of the Basque Country
13	Man	Socio-educational intervention service: child protection, people in exclusion, project facilitation	2001		Social education	University of the Basque Country
14	Woman	Education and sexology institute	2014		Social Education	University of Deusto
15	Man	Education and sexology institute	2014		Education	University of the Basque Country
16	Woman	Wedding planning	2019		Primary education	University of Deusto
17	Woman	Consultancy	2019		Social Education and Psychopedagogy	University of Deusto
18	Woman	E-learning services	2015		Social Education and Psychopedagogy	University of Deusto
19	Woman	Speech therapy	2006		Education	University of Deusto
20	Woman	Pedagogical support services	2005		Education	University of Deusto

Source: Developed by the author

A total of 20 subjects took part, of whom 16 were women (80%) and 4 were men (20%). Five respondents were entrepreneurs who had recently created companies (in the last three years), and the rest had well-established companies, the oldest dating back to 2001 (see Table 5).

The interviews were transcribed using F4 software to obtain an accurate verbatim transcription. The Atlas.ti programme was then used for data analysis.

Table 6 Table of categories and codes

<i>Deductive categories based on the dimensions of the Entrepreneurial University in Faculties and Schools of Education model (Paños-Castro et al., 2021).</i>	<i>Deductive codes</i>	<i>Most significant emerging codes (inductive codes)</i>
Infrastructures	Public infrastructure	Family
	Private infrastructure	Financial assistance Counselling Support Lack of knowledge Own financing Incubator Financial costs Business start-up process Bureaucracy Feasibility plan
Funding	Loan Initial investment	
Organisational context	Seed capital	Adaptation to the external context
	High-tech product Innovative products or services Emerging sectors R&D budget	
Teaching staff	Entrepreneurship training	Entrepreneurs
	Training in knowledge transfer Training in spin-off creation	Subject knowledge
Mission and strategy	Presence in the mission	
	Social commitment Internships with local companies	

Source: Developed by the author

Table 6 Table of categories and codes (continued)

<i>Deductive categories based on the dimensions of the Entrepreneurial University in Faculties and Schools of Education model (Paños-Castro et al., 2021).</i>	<i>Deductive codes</i>	<i>Most significant emerging codes (inductive codes)</i>
Methodologies	Use of active methodologies	Economic sphere
	Innovative educational resources	Regulated Methodological change Large groups Project-based learning Age of teachers
Internationalisation	International forums and congresses	Disinformation
	Exchange teaching staff	Travel cooperation
	Exchange students Erasmus	Family Language Interdisciplinarity
Curriculum-related work placements	Internships with entrepreneurs	No referents Business idea
<i>Emerging categories from the unplanned questions</i>	Improvement actions for faculties of education	Training courses Interdisciplinarity Entrepreneurship department Advice Entrepreneurial culture
	An entrepreneurial person	Characteristics Weaknesses
	The entrepreneurial process	Unemployment Entrepreneurship out of necessity Opportunity entrepreneurship Age Experience Family Incompatibility Security Economic insecurity

Source: Developed by the author

3 Results

Based on a categorical content analysis of 719 quotes, 218 codes and 11 code groups (categories) were established. A deductive coding technique was used, that is, the initial categories were determined prior to data collection on the basis of the interview script. However, emerging codes and categories have been created (Miles et al., 2020) (see Table 6).

A quick way to have an overview of the content of the interviews is by creating a word cloud or word list. The words that were most often mentioned (after using the filters to exclude words such as prepositions and determiners) were business (N = 157); university (N = 144); lecturers (N = 94); work (N = 92); entrepreneurship (N = 86); training (N = 83); people (N = 83); create (N = 80); education (N = 70) and individuals (N = 69). A word cloud of the most repeated words are shown in Figure 1.

Figure 1 Word cloud



The most represented codes were related to methodologies (N = 80), training (N = 48), characteristics of the entrepreneur (N = 45), entrepreneurship (N = 34) and faculty of education initiatives (N = 32).

The results of the categories are presented below:

3.1 Infrastructures

Half of the participants had applied for public financial support or advice from organisations such as the Ministry of Public Works, Emekin (from the Provincial Council of Gipuzkoa), Bilbao Ekintza (from the Bilbao City Council), the *Entreprenari* programme (from the University of the Basque Country), BEAZ (from the Provincial Council of Bizkaia), *Elkarlan* and the Government of Cantabria. They had obtained the information by their own means; in other words, at no time did the faculty inform them that this type of financial support was available. The benefits from this support as reported by the participants were the funding, the training focused on financial aspects and sales (marketing and social media), and the availability of a technical expert to answer questions. Only two people mentioned two disadvantages: having too much freedom and feeling a bit left out, and the excessive paperwork to apply for financial

support: "Look, I tried to go to Ingalde, here in Barakaldo, and they wanted me to do a project, and this, and that... honestly, I had to fill in a 500-page form and in my case, I did not see the point in filling in 500 pages because I was very clear about what I wanted, how I wanted it..." (Participant 1).

Finally, four people indicated that they had used incubators at Innogune at the University of Deusto, at the San Sebastian business incubator, at the Bilbao City Council and at Bic Berrilan. Benefits included training in marketing and financial issues, and cheaper rent.

3.2 Funding

All respondents have mainly relied on their own savings, with the exception of two people who took out a small loan to furnish their business premises and one person who took out a loan from the ICO (Spanish Official Credit Institute). One of the participants had his father as the main investor in his business.

They considered that their initial investment was not high, especially considering that many had equity partners. The initial investment was around €3,000 to cover mainly the costs of the website, furniture, graphic design, and a laptop. They argued that having some savings was essential, as there is no short-term economic stability.

3.3 organisational context

The participants interviewed noted that their company did offer innovative services, but these were not linked to any research projects, nor did they work in emerging sectors or offer high-tech products.

3.4 Teaching staff

Participants indicated that the teaching staff were classic and old-school. They were experts in their field and had a broad theoretical background, academic and professional experience, and no work experience in their field. Most had no training in entrepreneurship or spin-out creation, although they did have training in knowledge transfer.

Only three participants noted that they had some lecturers who were entrepreneurs as well as working at the university. They worked in an psychopedagogy practice, a psychomotor education company, and in state-subsidised schools.

3.5 Mission and strategy

None of the participants perceived that their faculty prioritised entrepreneurship in its mission and strategic plans, but they did give importance to social commitment, given the type of institution and the degree programmes offered.

3.6 Methodologies

Most of the participants reported that the teaching staff used traditional lecturing, passive methodologies, mainly based on listening to theory and note taking, which they found boring: "There were some exceptions that were striking precisely because of that; they

made you do things outside the university or tried to apply new things. But in fact... of all my lecturers, I can say that there were two who made us do those things (...). Otherwise, the practical side left a lot to be desired” (Participant 6). To a lesser extent, the teaching staff used group and individual work, oral presentations, practical cases, discussions, reflections, project-based learning methodology, case studies, role-play and research. There were no major differences with regard to the old university curriculum and the Bologna plan (Ministry of Education and Science, 2007). Eight participants completed their degrees under the old curriculum, and claimed that classes were mainly theoretical and instructional lectures. More active and participatory methodologies were relatively rarely used, although case studies, group work, reflections and role playing were mentioned. There were some differing opinions regarding the adaptation of the Spanish University System to the European Higher Education Area, but lectures still predominated. However, some participants said that they had good memories of university, even if the methodologies were not very good. They argued that universities are currently in a process of methodological change: “It seems to me that I had really awful lecturers, really awful, and had awful methodologies (...) Even so, I think that things are being done in the universities and I think that they are on the right track” (Participant 7).

Some considered that younger lecturers were much more involved in active and participatory methodologies, and believed that teachers are constrained and do not have much freedom to use innovative methodologies.

Some participants pointed out that the large class sizes of up to 160 students made it impossible to use more active and participatory methodologies: “Lecturers tried to do something participative, but with 150 students it is not easy” (Participant 8). The large number of students mainly corresponded to the former university curriculum, before the Bologna plan was implemented. Finally, textbooks, slides, and tests were the most frequently used educational resources, followed to a lesser extent by videos and worksheets. Participants also noted that lecturers rarely gave them freedom to create innovative educational resources.

3.7 Internationalisation

Few respondents took advantage of the Erasmus programme for different reasons: lack of information, language issues, family problems and the high cost involved. Those who did participate in the Erasmus programme chose London, Venezuela, the USA and Finland. For some of these entrepreneurs, Erasmus did not serve as an example of good practice for entrepreneurship. One of them reported: “(...) I have been able to do volunteering work overseas, which has allowed me to learn other practices as well” (Participant 2). However, the main benefits they highlighted included having a broader vision, being much more empathetic, having better active listening skills, meeting people, and learning values.

Only three respondents took part in forums and conferences as listeners, but none of them as actual participants. Sometimes they were also encouraged to attend other workshops or conferences held outside the university.

No participant recalled having had exchange lecturers from universities abroad. Some of them had had exchange students in the final years of their degree courses.

3.8 Curriculum-related work placements

All participants were required to take curriculum-related work placements in different settings such as schools, psychopedagogy practices and social organisations. However, hardly any of them considered their work placement mentor to be someone to look up to as an entrepreneur. Four participants reported that the work placements had helped them to see what they did not want to do and to learn new business models: "I was lucky that the university had an agreement with Iberdrola and they gave me access to Mundo Hogar, so I wrote educational reports online; then I became an expert in e-learning, which is what I later studied. This allowed me to get in touch with the company, and I learnt a lot about new business models" (Participant 10). "It allowed me to see what I do not want. It was basically about experimenting and seeing that it was an experience about getting to know myself; I mean, I do not want to work like that. I want to be an educator, but I do not want to do this" (Participant 11).

3.9 Improvement actions for faculties of education

The respondents made many proposals for improvement that the faculties of education could implement to promote entrepreneurship. Firstly, they proposed that training in entrepreneurship should be available in all degree courses, and not only linked to the faculties of economics. They suggested that students should be informed that there are some employment options other than working in a private state-funded school, being a civil servant, or being a wage earner: "I would definitely make people see that not everything is about preparing for the civil service entrance exam, or about being employed by others" (Participant 5); "It's a shame that everything is in economics, in business studies... People who are educators and have no interest in implementing an idea and a project that can make a contribution to the community, I think that is a shame" (Participant 12).

Secondly, two participants believed that it would be useful to teach basic knowledge in order to understand a payslip or to know where to look for relevant information on public subsidies or training: "This does not have to be only if you study business administration or management. For example, in higher degrees there is a subject called career guidance and training, which helps you with payslips, employment contracts... And I do not understand why the University of the Basque Country does not do that. It seems to me that this should be something basic" (Participant 1).

Thirdly, respondents suggested that emotional training should be provided, because students are very insecure about their abilities. Fourthly, they argued that students should have more freedom and autonomy, so that they are not so closely supervised by lecturers and they can better develop general skills. Fifthly, cross-faculty and project work would be very useful: "I think the idea that faculties are like hermetically sealed boxes is a mistake. The university is a privileged place where you have very strong disciplines that could collaborate with each other" (Participant 6).

There was also a proposal to create an entrepreneurship department; to adapt basic and applied research to real contexts; to create new spaces to be able to explore, be more creative and put new ideas into practice; to provide further support in practical aspects; and to give more information, as most of the respondents felt uninformed about the services offered in relation to extracurricular courses, training courses offered by alumni, etc.

3.10 *An entrepreneurial person*

3.10.1 *Characteristics*

The participants identified several characteristics that an entrepreneurial person should have, including having a sense of vocation, being courageous, risk-taking, determined, committed, adaptable to change, innovative, creative; having people skills, the ability to make decisions; being dynamic; having the ability to learn from failure, to engage in teamwork; being stubborn, obstinate, enthusiastic, constant, fearless, able to manage uncertainty, persevering, with own initiative and motivation and self-taught. They are a very confident people and not afraid of the future: “So what if it goes wrong? I can do so many other things!” (Participant 10); “I have been doing temporary substitute teaching and I am on the official employment lists, so that gives me a kind of security: the 20 years I worked before being here” (Participant 9); “I think that I’ve always been ok with not knowing what is going to happen in 6 months or a year. I have always felt that it was an opportunity to create something different, to do new things” (Participant 6).

Practically half of the participants considered that the characteristics of the entrepreneurial person are intrinsic. Others, however, believed that they are extrinsic, which accounts for the importance of entrepreneurial education throughout life, and of each individual’s experiences and decisions: “It is true that the entrepreneurial process does not come so much from universities, but also from other areas of our lives, because in the end we are beings who are connected to everything” (Participant 2).

3.10.2 *Weaknesses*

The main limitation that the respondents found in the faculties of education was the financial side; specifically, aspects related to accounting, numbers and Excel sheets are something completely alien to them, and they find them difficult to visualise and manage. They even considered themselves to be useless in these areas. However, they solved most of the financial aspects by hiring a manager or advisor, and to a lesser extent, others relied on the support of a family member or a partner with financial knowledge, whereas others handled these issues by taking a self-taught approach.

3.11 *The entrepreneurial process*

Some of the entrepreneurs interviewed had decided to become entrepreneurs because they were unemployed and needed some income; or simply because they were fed up with working in organisations where they did not feel represented. However, others had identified an opportunity in the market.

All the participants shared that they had a passion for building something personal that possessed specific hallmark characteristics: “Let us say that I felt a bit like the kids in talent shows who say that they knew they wanted to do it and they fought until they got there and gave their all” (Participant 20).

All participants reported that they want to continue to manage their company, except for one of them, for two different reasons: to have peace of mind and time for their family, and because having a civil servant job in education is incompatible with having another job.

Age and years of experience were two key elements. All the interviewees have set up their business after completing their degree; as they were so young, they did not know

how to focus their careers: "I really found myself at the end of my degree, literally not knowing what to do" (Participant 20); "My only interest was to get my degree, work and leave my parents' house..." (Participant 17). Moreover, the fewer family and financial burdens they had, the more security they showed: "The first few months we didn't know what our income would be. Well, we were young and didn't have any family responsibilities, so..." (Participant 13).

Some considered that, while entrepreneurship is now very fashionable, it is not for everyone, as it involves fear, uncertainty, financial insecurity, and it is an exhausting and highly demanding process that requires many hours spent on it: "I do not have a calling to be an entrepreneur at all because I hate numbers, I am afraid of economic insecurity... and today I have two children, a company, I am separated and I am not afraid at all" (Participant 10); "Every year when I receive the lists to be updated, because you have to include the points for the work you have done... well, every year I feel a bit shaky, you know? I feel a bit shaky as in... Is this where I should be? If I was looking to the future, this would not be the place. If I was looking into the future... if I get sick, if I have a difficult financial situation when I retire... this wouldn't be the place, would it? But then I look at the day to day, and I say: I can not lose this" (Participant 9).

4 Conclusions, future research, and limitations

As stated by Balu and Johanson (2010) and Aldana-Rivera et al. (2019), entrepreneurship entails high risk, hard work and determination as one needs to give up economic stability. Therefore, it is not an option for everyone, as psychological characteristics are significantly related to students' entrepreneurial intent (Bjekić et al., 2021). The participants were aware of this, but their passion prevailed over their fears and insecurities. The personality traits of a likely entrepreneur such as previous knowledge of the business, a high level of initiative, open-mindedness and coming from an entrepreneurial family environment (Rosado-Cubero et al., 2022), are important. Taking into account the high unemployment rates in Spain and the current dynamic and global environment (European Commission, 2006), universities are required to promote employment options that go beyond salaried employment (Global Entrepreneurship Monitor, 2020).

Almost all participants reported a lack of information from the faculties on various entrepreneurship issues such as extracurricular courses, public grants, infrastructures and training courses from the alumni association. As a result, it is suggested that information on these issues should be provided on what future employment options exist from the first years of the degree course, and not only when students are about to complete their studies. In this way, students would be able to develop their business idea, create networks, receive training and take some steps from the beginning of their university education. The case of The University College of Christian Churches for Teacher Education Vienna, which educates pre-service and in-service teachers for primary and secondary schools, could be an example of a good practice. It has a Centre for Entrepreneurship Education and value-based Business Didactics (HEInnovate). Similarly, public policies are considered essential in the development of countries' economies. Cousin et al. (2020) conducted a research study in Europe and the USA on the cause-effect relationship of public policies on entrepreneurship. In Europe, the cause-effect relationship is weaker than in America due to several factors: government

bureaucracy, high tax rates, restrictive labour regulations and difficult access to capital, among others. In Spain, public administrations have supported entrepreneurship in recent years through aid, guidance, advice and promotion, especially among young people. For example, the Entrepreneurship and Youth Employment Strategy (Spanish Government, 2013) and the new Work Plan (Ministry of Labour and Social Economy, 2022) aim to promote the entry of young people into the labour market by encouraging flat rates, setting up dedicated advice offices, providing financial support, etc. In the area of education, it would be interesting to include entrepreneurship in the syllabus of competitive examinations to become public school teachers (and civil servants) and to give candidates the opportunity to carry out internships with entrepreneurs and score points in the competitive examinations for their experience as entrepreneurs.

Education faculty members have hardly any training in entrepreneurship, knowledge transfer or spin-out creation. The entrepreneurial experience of faculty members is a relevant moderator to be considered in setting the stage for thriving universities' ecosystems and to create an entrepreneurial culture (Salati et al., 2020). As the European Union (2014) pointed out, 'all lecturers and future lecturers should at least have access during their career to training experience in the key issues and methods related to entrepreneurial learning and entrepreneurship education' (p.7). Consequently, it is necessary to include entrepreneurship in the initial training of university teachers either through extracurricular and/or curricular courses, and as part of general and/or specific competences. Unfortunately, however, entrepreneurship is not sufficiently integrated into the curricula of education faculties, but it is included in business and economics degrees (European Commission, 2008). Entrepreneurship is no longer seen as a field that belongs exclusively to business degrees (Roberts et al., 2014) but should be offered to all disciplines, faculties and students (European Commission, 2006). A good practice is inter-faculty collaboration between economics and non-economics faculties, as interdisciplinary teams are more conducive to promoting entrepreneurial skills among students (Lackéus, 2015; Lourenco et al., 2013). Likewise, raising awareness of the entrepreneurial culture is essential, since "a greater awareness of the entrepreneurial profession, (...) would result in a greater number of enterprises and greater global, regional and national development" (European Commission, [2003], p. 46).

It is clear that university lecturers still tend to use traditional, non-participatory methodologies, such as lectures. A competent teaching-learning process requires active, student-centred methodologies such as project – or problem-based learning, cooperative learning, service learning, and design thinking and gamification, among others (Ministry of Education, Culture and Sport, 2015).

Undoubtedly, universities must adapt to social needs and "strengthening co-operation with the world of work and analysing and anticipating societal needs (...) developing entrepreneurial skills and initiative should become major concerns of higher education, in order to facilitate employability of graduates who will increasingly be called upon to be not only job seekers but also and above all to become job creators" [UNESCO, (1998), p.6].

In response to the first specific objective, this study formulates three proposals for the future. Firstly, to provide Faculties of Education with greater flexibility to adapt curricula to social demands, and to this end, to create a specific competence in entrepreneurship within the 30 and 60 European credit transfer and accumulation system (ECTS) that official university degrees in primary education can award for qualifying and non-qualifying areas (Ministry of Education and Science, 2007). Secondly, to strongly

promote both initial and ongoing training in entrepreneurial skills and active methodologies for university teaching staff. In this sense, the new Royal Decree 822/2021, of 28 September, which establishes the organisation of university education and the procedure for quality assurance (Ministry of Universities, 2021), includes lifelong learning of the skills and abilities of citizens for better employability, and recognises up to 30 ECTS credits that are complementary to the bachelor's degree. And thirdly, to introduce more flexibility regarding the current incompatibility between being a civil servant and working on a self-employed basis in education, as provided for in Law 53/1984, of 26 December, on the incompatibilities of personnel in the service of the public administrations (Spanish Head of State, 1985). With regard to the second specific objective, the entire university community should be made aware of the importance of entrepreneurship and students should be made aware of its importance as an employment alternative.

Finally, the limitations of the study should be noted. As this is a specific case study from the Autonomous Region of the Basque Country, it would be advisable to replicate the study in other Autonomous Regions. In addition, we are unaware of the existence of more current databases on entrepreneurs, and it has therefore been difficult to establish contact with a broader sample. It would also be interesting to investigate the perspective of university lecturers and students who are about to complete their degree in order to explore whether entrepreneurship may be a job opportunity for them.

References

- Ajzen, I. (1991) 'The theory of planned behavior', *Organizational Behavior and Human Decision Processes*, Vol. 50, No. 2, pp.179–211 [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T).
- Aldana-Rivera, E., Tafur-Castillo, J., Gil, I. and Mejía, C. (2019) 'Práctica pedagógica de emprendimiento en docentes de educación superior en Institución Educativa Universitaria de Barranquia', *Archivos Venezolanos de Farmacología y Terapéutica*, Vol. 38, No. 2, pp.8–22.
- Alferaih, A. (2017) 'Weight-and meta-analysis of empirical literature on entrepreneurship: towards a conceptualization of entrepreneurial intention and behavior', *The International Journal of Entrepreneurship and Innovation*, Vol. 18, No. 3, pp.195–209 <https://doi.org/10.1177/1465750317722114>.
- Álvarez, R., De Noble, A. and Jung, D. (2006) 'Educational curricula and self-efficacy: entrepreneurial orientation and new venture intentions among university students in Mexico', *International Research in the Business Disciplines*, Vol. 5, No. 1, pp.379–403 [https://doi.org/10.1016/S1074-7877\(06\)05019-7](https://doi.org/10.1016/S1074-7877(06)05019-7).
- Balu, V. and Johanson, M. (2010) *Entrepreneurship as a way of life* [online] https://www.researchgate.net/publication/48380472_Entrepreneurship_as_a_way_of_life (accessed 17 December 2021).
- Bjekić, R., Jelača, M.S., Berber, N. and Aleksić, M. (2021) 'Factors affecting entrepreneurial intentions of faculty students', *Management: Journal of Sustainable Business and Management Solutions in Emerging Economies*, Vol. 26, No. 2, pp.1–13, <http://doi.org/10.7595/management.fon.2020.0024>.
- Cantillon, R. (1755) *Ensayo Sobre La Naturaleza Del Comercio En General*, Fondo de Cultura Económica, México.
- Carayannis, E.G., Rozakis, S. and Grigoroudis, E. (2016) 'Agri-science to agri-business: the technology transfer dimension', *The Journal of Technology Transfer*, Vol. 43, No. 4, pp.837–843, <http://doi.org/10.1007/s10961-016-9527-y>.

- Cárdenas, J., Guzmán, A., Sánchez, C. and Vanegas, J.D. (2015) '¿Qué se crea al fomentar el emprendimiento? Los principales impactos de la formación en este campo', *Universidad and Empresa*, Vol. 17, No. 28, pp.173–190, <http://dx.doi.org/10.12804/rev.univ.empresa.28.2015.08>.
- Castillo-Vergara, M. and Álvarez-Marín, A. (2016) 'Entrepreneurship perception in higher education, a comparative study among students, faculty members and directors', *Revista Latinoamericana de Ciencias Sociales, Niñez y Juventud*, Vol. 14, No. 1, pp.221–233, <http://dx.doi.org/10.11600/1692715x.1411426114>.
- Cousin, J.d.R., Freire, A.P. and Morales, D.C. (2020) 'Políticas públicas orientadas hacia el emprendimiento: un análisis de América y Europa', *Unidades Episteme*, Vol. 7, No. 4, pp.439–449.
- Davey, T., Hannon, P. and Penaluna, A. (2016) 'Entrepreneurship education and the role of universities in entrepreneurship: introduction to the special issue', *Industry and Higher Education*, Vol. 30, No. 3, pp.171–182, <https://doi.org/10.1177/0950422216656699>.
- Engle, R., Dimitriadi, N., Gavidia, J.V., Schlaegel, C., Delanoe, S., Alvarado, I., He, X., Buame, S. and Wolff, B. (2010) 'Entrepreneurial intent. a twelve-country evaluation of Ajzen's model of planned behavior', *International Journal of Entrepreneurial Behaviour and Research*, Vol. 16, No. 1, pp.35–57, <https://doi.org/10.1108/13552551011020063>.
- Etzkowitz, H., Webster, A., Gebhardt, C. and Cantisano, B.R. (2000) 'The future of the university and the university of the future: evolution of ivory tower to entrepreneurial paradigm', *Research Policy*, Vol. 29, No. 2, pp.313–330, [https://doi.org/10.1016/S0048-7333\(99\)00069-4](https://doi.org/10.1016/S0048-7333(99)00069-4).
- European Commission (2003) *Libro Verde: El Espíritu Empresarial En Europa* [online] https://periodicooficial.jalisco.gob.mx/sites/periodicooficial.jalisco.gob.mx/files/libro_verde_e_l_espiritu_empresarial_en_europa_-_comison_de_las_comunidades_europeas.pdf (accessed 6 January 2022).
- European Commission (2006) 'Entrepreneurship Education in Europe: fostering entrepreneurial mindsets through education and learning', *Final Proceedings* [online] http://www.alerteducation.eu/files/oslo_report_final_2006.pdf (accessed 15 November 2021).
- European Commission (2008) 'La iniciativa emprendedora en la Enseñanza Superior, especialmente en estudios no empresariales', *Resumen Del Informe Final Del Grupo De Expertos* [online] http://www.cdiex.org/aprendizaje/documento_8.pdf (accessed 2 November 2021).
- European Union (2006) Competencias clave para el aprendizaje permanente-Un marco europeo [online] <https://www.educacionyfp.gob.es/dctm/ministerio/educacion/mecu/movilidad-europa/competenciasclave.pdf?documentId=0901e72b80685fb1> (Accessed 15 December 2021).
- European Union (2014) 'Educación en emprendimiento', *Guía Del Educador* [online] <https://pagina.jccm.es/europa/pdf/PUBLICACIONES/2014%20Guia%20del%20Educador%20en%20emprendimiento.pdf> (accessed 3 November 2021).
- Ferreya, H.A. (2019) 'El aprender a emprender como uno de los pilares de la educación del futuro en el marco de la construcción de la calidad educativa', *Praxis Pedagógica*, Vol. 19, No. 24, pp.75–100, <http://dx.doi.org/10.26620/uniminuto.praxis.19.24.2019.75-100>.
- Finnish Ministry of Education and Culture (2009) *Guidelines For Entrepreneurship Education* [online] <https://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/78871/opm09.pdf?sequence=1> (accessed 17 December 2021).
- Fuentes, M.M. (2018) 'Coordinación general de emprendimiento de la universidad de Granada-ugr emprendedora: un modelo de gestión para lograr una universidad emprendedora', in Sánchez-García, J.C. and Hernández-Sánchez, B. (Eds.): *Emprendimiento En Las Universidades: Perspectivas Actuales Y Proyecciones Futuras*, pp.21–37, Ediciones Universidad de Salamanca, Salamanca.

- Gibb, A. (2008) 'Entrepreneurship and enterprise education in schools and colleges: insights from UK practice', *International Journal of Entrepreneurship Education*, Vol. 6, No. 2, p.48.
- Global Entrepreneurship Monitor (2019) *Informe GEM España 2018–2019* [online] <https://www.gem-spain.com/wp-content/uploads/2019/05/GEM2018-2019.pdf> (accessed 2 October 2021).
- Global Entrepreneurship Monitor (2020) *Informe GEM España 2019–2020* [online] https://www.gem-spain.com/wp-content/uploads/2020/06/Informe-GEM-Espa%C3%B1a-2019_20.pdf (accessed 23 October 2021).
- González-Tejerina, S. and Vieira, M.J. (2021) 'La formación en emprendimiento en Educación Primaria y Secundaria: una revisión sistemática', *Revista Complutense de Educación*, Vol. 32, No. 1, pp.99–111, <https://doi.org/10.5209/rced.68073>.
- Guerrero, M., Urbano, D., Ramos, A., Ruiz-Navarro, J., Neira, I. and Fernández-Laviada, A. (2016) *Observatorio de Emprendimiento Universitario en España*, Edición 2015–2016 [online] https://www.crue.org/wp-content/uploads/2020/02/20161201_Observatorio-de-Emprendimiento-Universitario_informe_web.pdf (accessed 27 December 2021).
- Hartshorn, C. and Hannon, P.D. (2005) 'Paradoxes in entrepreneurship education: chalk and talk or chalk and cheese? A case approach', *Education+Training*, Vol. 47, Nos. 8–9, pp.616–627, <https://doi.org/10.1108/0040091051063152>.
- HEInnovate (2022) [online] <https://www.heinnovate.eu/en/heinnovate-resources/resources/preparing-teachers-entrepreneurial-education-university-college> (accessed 3 June 2022).
- Jiménez, R. (2015) *Educación Emprendedora*, Programa TALOS para el desarrollo de la iniciativa emprendedora en Ciencias de la Educación, Octaedro, Barcelona.
- Julià, J.F. (2013) 'Tribuna de opinión: emprendimiento y universidad. Una referencia al caso de España y a la UPV', *REVESCO*, Vol. 113, pp.7–27, http://dx.doi.org/10.5209/rev_REVE.2014.v113.43394.
- Kolehmainen, J., Irvine, J., Stewart, L., Karacsonyi, Z., Szabó, T., Alarinta, J. and Norberg, A. (2016) 'Quadruple Helix, innovation and the knowledge-based development: lessons from remote, rural and less-favoured regions', *Journal of the Knowledge Economy*, Vol. 7, No. 1, pp.23–42, <https://doi.org/10.1007/s13132-015-0289-9>.
- Korhonen, M., Komulainen, K. and Rätty, H. (2012) 'Not everyone is cut out to be the entrepreneur type: how finnish school teachers construct the meaning of entrepreneurship education and the related abilities of the pupils', *Scandinavian Journal of Educational Research*, Vol. 56, No. 1, pp.1–19, <https://doi.org/10.1080/00313831.2011.567393>.
- Lackéus, M. (2015) 'Entrepreneurship in education', *What, Why, When, How* [online] https://www.oecd.org/cfe/leed/BGP_Entrepreneurship-in-Education.pdf (accessed 10 November 2021).
- Lanbide (2017) *Estudio De Incorporación A La Vida Activa De Las Personas Universitarias* [online] <https://www.lanbide.euskadi.eus/estadistica/insersion-laboral-universitaria-durante-2017-promocion-2017/y94-estadist/es/> (accessed 23 December 2021).
- Lourenco, F., Taylor, T. and Taylor, D. (2013) 'Integrating 'education for entrepreneurship' in multiple faculties in 'half-the-time' to enhance graduate entrepreneurship', *Journal of Small Business and Enterprise Development*, Vol. 20, No. 3, pp.503–525, <https://doi.org/10.1108/JSBED-04-2013-0052>.
- Lüthje, C. and Franke, N. (2003) 'The 'making' of an entrepreneur: testing a model of entrepreneurial intent among engineering students at MIT', *R&D Management*, Vol. 33, No. 2, pp.135–147, <https://doi.org/10.1111/1467-9310.00288>.
- Martínez, F.X., Bajaña, J.X., Chávez, C.E., Guerrero, M.R. and Oña, B.E. (2016) 'Ecosistema del emprendimiento en la universidad contemporánea', *Didasc@lia: Didáctica y Educación*, Vol. 7, No. 6, pp.249–261.
- Miles, M., Huberman, A.M. and Saldaña, J. (2020) *Qualitative Data Análisis. A Methods Sourcebook*, SAGE Publications, California.

- Ministry of Education and Science (2007) *Orden ECI/3857/2007, De 27 De Diciembre, Por La Que Se Establecen Los Requisitos Para La Verificación De Los Títulos Universitarios Oficiales Que Habilitan Para El Ejercicio De La Profesión De Maestro En Educación Primaria* [online] <https://www.boe.es/boe/dias/2007/12/29/pdfs/A53747-53750.pdf> (accessed 16 December 2021).
- Ministry of Education and Science (2007) *Real Decreto 1393/2007, De 29 de Octubre, Por el Que se Establece La Ordenación De Las Enseñanzas Universitarias Oficiales*, *Boletín Oficial del Estado*, 260 [online] <https://www.boe.es/buscar/act.php?id=BOE-A-2007-18770> (accessed 12 December 2021).
- Ministry of Education, Culture and Sport (2015) *Orden ECD/65/2015, de 21 De Enero, Por La Que se Describen Las Relaciones Entre Las Competencias, Los Contenidos y Los Criterios De Evaluación De La Educación Primaria, La Educación Secundaria Obligatoria y El Bachillerato* [online] <https://www.boe.es/boe/dias/2015/01/29/pdfs/BOE-A-2015-738.pdf> (accessed 16 December 2021).
- Ministry of Education, Culture and Sport (2016) ‘Inserción laboral de los egresados universitarios. La perspectiva de la afiliación a la seguridad social’, *Primer Informe* [online] <https://www.educacionyfp.gob.es/dam/jcr:3469cbcd-0dfa-459e-a5c9-f27285b72121/insercion-laboral-egresados-universitarios-.pdf> (accessed 17 December 2021).
- Ministry of Labour and Social Economy (2022) *Plan Anual de Política de Empleo para 2022* [online] <https://www.boe.es/boe/dias/2022/05/04/pdfs/BOE-A-2022-7189.pdf> (accessed 5 June 2022).
- Ministry of Universities (2021) ‘Real Decreto 822/2021, de 28 de septiembre, por el que se establece la organización de las enseñanzas universitarias y del procedimiento de aseguramiento de su calidad’, *Boletín Oficial del Estado*, Vol. 233 [online] <https://www.boe.es/buscar/pdf/2021/BOE-A-2021-15781-consolidado.pdf> (accessed 20 December 2021).
- Organisation for Economic Co-operation and Development (2005) ‘The definition and selection of key competencies’, *Executive Summary* [online] <https://www.oecd.org/pisa/35070367.pdf> (accessed 15 December 2021).
- Paños-Castro, J., Markuerkiaga, L. and Bezanilla, M.J. (2021) ‘An Analysis of the entrepreneurial university in the faculties of education in Spain: self-perception among deans’, *Sustainability*, Vol. 13, No. 21, p.11768, <https://doi.org/10.3390/su132111768>.
- Pérez, F. and Serrano, L. (2012) *Universidad, Universitarios y Productividad En España* [online] https://www.fbbva.es/wp-content/uploads/2017/05/dat/DE_2012_universidad_universitarios.pdf (accessed 4 December 2021).
- Philpott, K., Dooley, L., O’Reilly, C. and Lupton, G. (2011) ‘The entrepreneurial university: examining the underlying academic tensions’, *Technovation*, Vol. 31, No. 4, pp.161–170, <https://doi.org/10.1016/j.technovation.2010.12.003>.
- Pruett, M. and Harun, S. (2017) ‘Faculty-student perceptions about entrepreneurship in six countries’, *Education + Training*, Vol. 59, No. 1, pp.105–120, <https://doi.org/10.1108/ET-03-2013-0028>.
- Roberts, J., Hoy, F., Katz, J.A. and Neck, H. (2014) ‘The challenges of infusing entrepreneurship within no business disciplines and measuring outcomes’, *Entrepreneurship Research Journal*, Vol. 4, No. 1, pp.1–12, <https://doi.org/10.1515/erj-2013-0080>.
- Rosado-Cubero, A., Freire-Rubio, T. and Hernández, A. (2022) ‘Entrepreneurship: what matters most’, *Journal of Business Research*, Vol. 144, pp.250–263, <https://doi.org/10.1016/j.jbusres.2022.01.087>.
- Rovayo, G. (2012) ‘El emprendimiento y la educación no siempre van en la misma dirección’, *Polémika*, Vol. 1, No. 2, pp.96–103.
- Ruiz, J., Ramos, A. and Lechuga, P. (2019) ‘Emprendimiento universitario en España’, *Informe GUESSS*, Vol. 2018 [online] https://www.guesssurvey.org/resources/nat_2018/GUESSS_Report_2018_Spain.pdf (accessed 18 November 2021).

- Salati, G.H., Brandão, B., Leite, M. and Rücker, P. (2020) 'University ecosystems and the commitment of faculty members to support entrepreneurial activity', *BAR – Brazilian Administration Review*, Vol. 17, No. 2, <http://dx.doi.org/10.1590/1807-7692bar2020190013>.
- Spanish Government (2013) *Strategy for Entrepreneurship and Youth Employment 2013/2016* [online] https://www.mites.gob.es/ficheros/rse/documentos/eeej/EEEJ_Documento.pdf (accessed 5 June 2022).
- Spanish Government (2021) *Estrategia España Nación Emprendedora* [online] https://www.lamoncloa.gob.es/presidente/actividades/Documents/2021/110221-Estrategia_Espana_Nacion_Emprendedora.pdf (accessed 22 October 2021).
- Spanish Head of State (1985) *Ley 53/1984, De 26 De Diciembre, De Incompatibilidades Del Personal Al Servicio De Las Administraciones Públicas* [online] <https://www.boe.es/buscar/pdf/1985/BOE-A-1985-151-consolidado.pdf> (accessed 8 December 2021).
- Spanish Head of State (2006) *Ley Orgánica 2/2006, de 3 de mayo, de Educación* [online] <https://www.boe.es/buscar/pdf/2006/BOE-A-2006-7899-consolidado.pdf> (accessed 17 September 2021).
- Spanish Head of State (2013) *Ley Orgánica 8/2013, de 9 de Diciembre, Para La Mejora De La Calidad Educativa* [online] <https://www.boe.es/buscar/pdf/2013/BOE-A-2013-12886-consolidado.pdf> (accessed 17 September 2021).
- Spanish National Statistics Institute (2021) [online] <https://www.ine.es/index.htm> (accessed 12 December 2021).
- Tarhan, M. (2021) 'Perceptions of pre-service teachers regarding entrepreneurship education: a metaphoric study', *International Journal of Psychology and Educational Studies*, Vol. 8, No. 2, pp.61–75, <https://dx.doi.org/10.52380/ijpes.2021.8.2.315>.
- Timmons, J. and Spinelli, S. (2009) *New Venture Creation, Entrepreneurship for the 21st Century*, McGraw-Hill Higher Education, New York.
- Torres, R.M., Espinoza, H.B., Macías, R.K., Chávez, C.E., Fajardo, J.R. and Martínez, F.X. (2018) 'Interacción universidad-entorno. una mirada para el emprendimiento en el siglo XXI', *Revista Didasc@lia: Didáctica y Educación*, Vol. 11, No. 2, pp.1–15.
- UNESCO (1998) 'World declaration on higher education for the twenty-first century: vision and action and framework for priority action for change and development in higher education', in *World Conference on Higher Education Higher Education in the Twenty-First Century: Vision and Action*, Paris, pp.1–15.
- Vásquez, C. (2017) 'Educación para el emprendimiento en la universidad', *Estudios De La Gestión: Revista Internacional De Administración*, Vol. 2, No. 2, pp.121–147 [online] <https://repositorio.uasb.edu.ec/bitstream/10644/5957/1/07-ES-Vasquez.pdf>.
- Volkman, C. (2004) 'Entrepreneurial studies in higher education', *Higher Education in Europe*, Vol. 29, No. 2, pp.177–185, <https://doi.org/10.1080/0379772042000234802>.
- Yin, Y., Yang, L. and Liu, B. (2020) 'Analysis on entrepreneurship psychology of preschool education students with entrepreneurial intention', *Frontiers in Psychology*, Vol. 11, <https://doi.org/10.3389/fpsyg.2020.01559>.

Notes

- 1 These university degrees were not offered.
- 2 Graduates who had completed more than one university degree.